

Introduction to Neuroscience: Behavioral Neuroscience

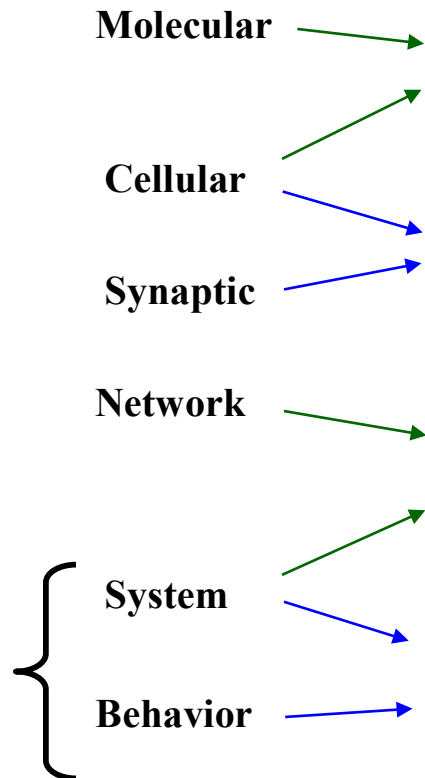
Weizmann Institute of Science

2021-2022, 2nd semester

Coordinator: Nachum Ulanovsky

Core courses at the Weizmann Institute in Brain Sciences: Systems, Computational and Behavioral Neuroscience

Levels of Analysis of the Nervous System



Four Core Courses in Neuroscience

**Introduction to Neuroscience:
Molecular Neuroscience - Genes to Behavior**

**Introduction to Neuroscience:
Cellular and Synaptic Physiology**

**Introduction to Neuroscience:
Systems Neuroscience**

**Introduction to Neuroscience:
Behavioral Neuroscience**



Course coordinator: **Nachum Ulanovsky**

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Course Website (*will include ALL the presentations*):

www.weizmann.ac.il/brain-sciences/labs/ulanovsky/courses

All lectures will be delivered Physically – unless notified otherwise.

No Video recording of lectures is possible.

Course syllabus (by week)

Characteristics of this course:

- No classical structure to courses in Behavioral Neuroscience (unlike the course in Cellular and synaptic Physiology) – as there is no Grand Theory of Behavior.
- We structured the course based on the Tradeoff between two approaches: The Neuroethological approach and the Neuropsychological approach.

(Go over the syllabus)

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Formalities

- **Grading:** 100% - Final exam (*open material*). NO compulsory reading.
→ This year in the exam we will have (i) new sets of questions, and (ii) less choice of questions than in previous years.

- **Bibliography:**

We will use three main textbooks in this course:

- *Behavioral Neurobiology, An integrative approach*, 2nd ed., Zupanc G. (Oxford, 2010)
- *Behavioral Neurobiology*, Carew J. (Sinauer, 2000)
- *Learning and Behavior*, Bouton M. (Sinauer, 2007)

Additional material for some of the lectures is covered in the following books:

- *Sensory Ecology*, Dusenbery D. (Freeman, 1992)
- *An Introduction to Behavioral Endocrinology*, 4th ed., Nelson R. (Sinauer, 2011)
- *Neuroeconomics: Decision making and the Brain*, 2nd ed., Glimcher P. and Fehr E. (Academic Press, 2013)